

Sub A1 video camera

1. A method for recording a multimedia presentation, comprising the steps of:
  - a) capturing a motion image and accompanying audio of a scene with a digital video camera adapted to record both motion and higher resolution still images;
  - b) compressing the motion image and the accompanying audio and storing the compressed motion image and audio;
  - c) periodically during the capture of the motion image, capturing a higher resolution still image of the scene;
  - d) creating a pointer linking the still image with a corresponding frame in the compressed motion image; and
  - e) storing the still image with a header including the pointer.
2. The method claimed in claim 1, further comprising the steps of:
  - f) generating low resolution index images from the higher resolution still images with pointers linking the index images to the high resolution still images and storing the index images with their associated pointers;
  - g) displaying a plurality of the low resolution index images;
  - h) selecting an index image from the displayed index images;
  - i) employing the pointers stored in the associated high resolution still image and the associated index image, to retrieve a corresponding segment of the compressed motion image;
  - j) decompressing the retrieved portion of the compressed motion image; and
  - k) displaying the decompressed portion of the motion image.
3. A system for recording and displaying a multimedia presentation, comprising:
  - a) a digital camera, the digital camera including
    - i) a solid state image sensor for selectively generating a sampled analog video image signal or a higher resolution sampled analog still image signal,
    - ii) a microphone for generating an analog audio signal,
    - iii) analog to digital converter means for converting the sampled analog video image signals and audio signal to a digital image signal and digital audio signal,
    - iv) an audio visual encoder for compressing the digital video signal and associated digital audio signal to form a compressed video bit stream,
    - v) means for periodically causing the camera to capture a higher resolution still image to form a still image file, and

vi) means for creating a pointer linking a captured high resolution still image with a corresponding frame in the compressed video bit stream and appending the pointer to the still image file;

b) an object oriented image processing system, including;

i) an image processing computer,

ii) an object oriented operating system,

iii) a image memory for storing the compressed video bit stream and the still image files as objects,

iv) a graphic user interface including a display and operator input device,

v) a decoder for decoding the compressed video bit stream, and

vi) application program means for generating low resolution index images from the higher resolution still images with pointers linking the index images to the high resolution still images and storing the index images with their associated pointers as objects in the image memory, for displaying a plurality of the low resolution index images on the graphic user interface and responsive to operator selection of an index image from the displayed index images, employing the pointers stored with the selected index image and the associated high resolution still image, to retrieve a corresponding portion of the compressed motion image, decompressing the retrieved portion of the compressed motion image, and displaying the decompressed portion of the motion image.